

# MERITOR WABCO

## Technical Bulletin

### Service Procedures for Manifold Dash Valve

#### Hazard Alert Messages

Read and observe all Warning and Caution hazard alert messages in this publication. They provide information that can help prevent serious personal injury, damage to components, or both.

#### How to Obtain Additional Maintenance and Service Information

If you have any questions about the material covered in this publication, or for more information about the Meritor WABCO product line, please contact the ArvinMeritor Customer Service Center at 800-535-5560 or visit our website, [meritorwabco.com](http://meritorwabco.com).

#### Description and Function

When the Meritor WABCO manifold dash valve knobs are pushed in, the parking brakes are released, and when the knobs are pulled out, the parking brakes are applied.

The manifold dash valve provides an automatic application of the parking brakes.

The manifold dash valve allows the towing vehicle to operate without a trailer (bobtail) when the trailer supply knob is out.

The manifold dash valve also has an integral double check valve that delivers the higher of the primary and secondary pressures to the parking brake system.

#### Service Procedures

Before servicing the Meritor WABCO manifold dash valve, carefully read and follow all outlined procedures.

#### WARNING

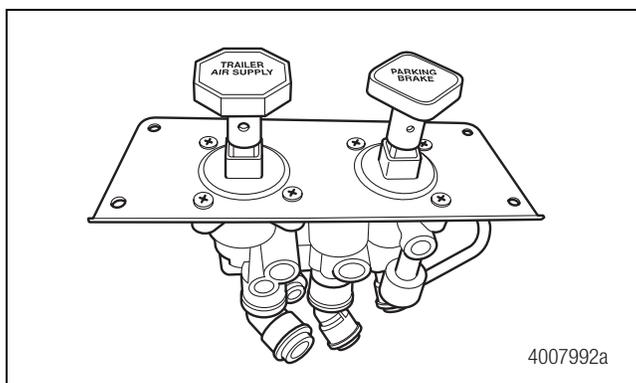
To prevent serious eye injury, always wear safe eye protection when you perform vehicle maintenance or service.

Park the vehicle on a level surface. Block the wheels to prevent the vehicle from moving. Support the vehicle with safety stands. Do not work under a vehicle supported only by jacks. Jacks can slip and fall over. Serious personal injury and damage to components can result.

Open drain valves on all reservoirs to remove all pressure from the air system before you disconnect any component. Pressurized air can cause serious personal injury.

#### Removing the Manifold Dash Valve

1. Wear safe eye protection.
2. Block the wheels to prevent the vehicle from moving.
3. Drain the air brake system. Open all of the drain valves on all of the reservoirs.
4. Follow the vehicle manufacturer's recommendations for removing all electrical power from the vehicle.
5. Remove and save the mounting hardware that secures the valve to the dash.



- Identify ports and mark corresponding information on all air line tubing on the valve to ensure that the replacement valve is connected correctly. Color-coded tubing is recommended for new installations.
- Using a tubing removal tool or similar device, disconnect the push-to-connect air line tubing on the valve and cover the ends of the lines to protect them against contamination.
- Remove the manifold dash valve assembly.

### Installing the Manifold Dash Valve

- Install the new manifold dash valve into the dash using the hardware removed in Step 5 of the removal procedure.

#### WARNING

**Ensure the tubing is connected correctly and securely. Insert the tubing into the push-to-connect fitting until it hits a stop in the fitting. After inserting the tubing, pull on the tubing to ensure that it is locked in the fitting. Unsecured tubing can cause excessive leakage which may lead to a loss of braking function, resulting in loss of vehicle control.**

**Do not kink the tubing. Kinked tubing can block the flow of air which may cause a loss of braking function, resulting in loss of vehicle control.**

#### CAUTION

**Tubes for push-to-connect fittings must be cut cleanly and end cuts must be perpendicular within seven degrees. Angles and sharp edges can damage the seal in the fitting and cause air leakage.**

- Connect the air line tubing to the corresponding ports identified during removal.
- Before operating the vehicle, be sure all components and systems are restored to their correct operation.

### Function and Leakage Test

- With 125 ±5 psi (862 ±34 kPa) in the service reservoirs, slowly reduce the pressure in the primary reservoir. The pressure in the secondary reservoir must not drop below 110 psi (758 kPa). Repeat the procedure except reduce the pressure in the secondary reservoir. The pressure in the primary reservoir must not drop below 110 psi (758 kPa).

- With 65 ±5 psi (448 ±34 kPa) in the supply reservoirs, push the red knob in. The knob must stay in and the trailer delivery port pressure must be 65 ±5 psi (448 ±34 kPa).
- Increase the pressure in all supply reservoirs to 125 ±5 psi (862 ±34 kPa). With the knobs out, apply a soap solution to the exhaust port. Leakage of a one-inch (25.4 mm) bubble in three seconds is permissible.
- Push both knobs in. Apply a soap solution to the exhaust port. Leakage of a one-inch (25.4 mm) bubble in three seconds is permissible.
- Apply a soap solution to the push-to-connect fittings. Leakage of 1/4-inch (6.35 mm) bubble in three seconds is permissible at the tube fittings.
- Begin to exhaust the pressure in all supply reservoirs. The red knob must pop out when the supply pressure reaches 45 to 20 psi (310 to 138 kPa). The yellow knob must pop out before the supply pressure reaches 20 psi (138 kPa).
- Push and hold the red knob in and continue to reduce the supply pressure in all service reservoirs. Air must start to exhaust when the supply pressure reaches 20 psi (138 kPa) minimum.
- With both knobs out, increase the pressure in the supply reservoirs to 65 ±5 psi (448 ±34 kPa). Push the yellow knob in. The knob must stay in and the tractor delivery port pressure must be 65 ±5 psi (448 ±34 kPa).
- Increase the pressure in the supply reservoirs to 125 ±5 psi (862 ±34 kPa). Push both knobs in and then pull the red knob out. The yellow knob must stay in.
- With 125 ±5 psi (862 ±34 kPa) in the supply reservoirs, push both knobs in. Pull the yellow knob out and the red knob must pop out immediately after the yellow knob is pulled out.

## Troubleshooting

### Troubleshooting the Manifold Dash Valve

#### WARNING

**The manifold dash valve is an important part of the air brake system. Never ignore any symptom such as leakage or a change in operation. Loss of braking function may occur, resulting in loss of vehicle control.**

- Conduct the Function and Leakage Test.
- Replace the valve if it does not pass the Function and Leakage Test.

## MERITOR WABCO

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